

# Trap door

**The trap door has been very similar from 1954 to 1984.**

**Harley engineers added the trap door in 1954 to simplify any repairs needed in the transmission. In the 1952 and 1953 models, you have to split the case to service the transmission.**

**The factory was not very diligent about maintaining part numbers for this part. Be aware that the number embossed on the door is a casting part number, not the service part number in the parts manuals.**

**There are several variations, but many parts will interchange and may work for your bike.**



The Iron Sportster trap door assembly holds the mainshaft, countershaft, and shifter mechanism.



The trap door is held in with 4 5/16 course-thread bolts on the left side of the engine. (courtesy scottericsonon)

## No service part number, casting 34845-54

1954-1956 K-models



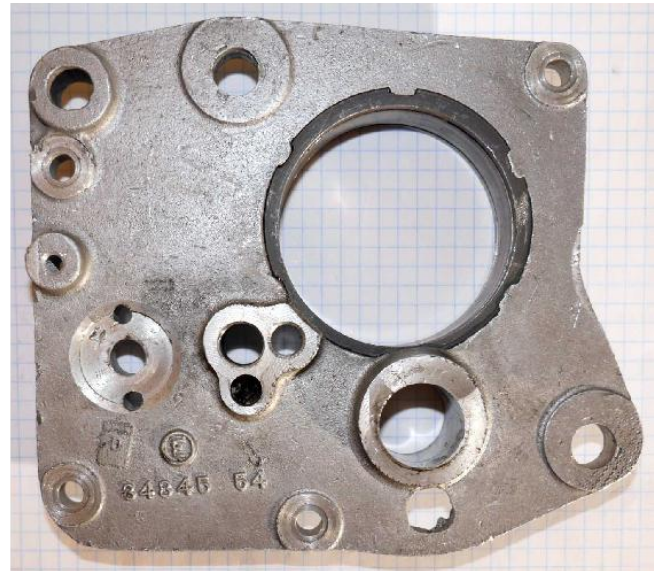
The 1952 and 1953 K-models did not have a trap door. You have to split the cases to service the tranny. The 1954 door is similar to the -57 door but the dowel holes are tapered, instead of straight. The boss to mount the primary cover sticks out much further.



The backside of the trap door is where the shifter mechanism, as well as the shifter forks, and the gear shafts. Harley engineers must have considered this door part of the left case, hence no part number was cut.

## 34844-57

1957-1976 all, but with variations



The same 34845-54 casting number as the K-model door, but a different casting at the primary boss mount.

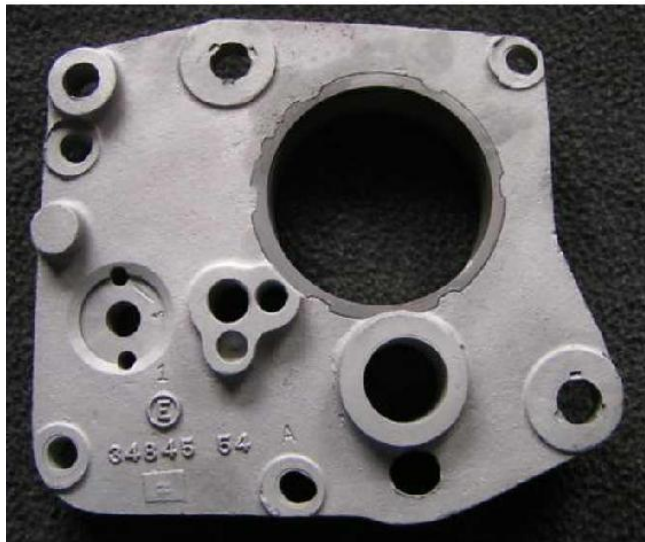


The door is machined for straight dowel pins, otherwise similar to the K-model door. Shorter boss for mounting the primary cover. Shorter boss would allow more parts to fit in a box, but would also strip out easier.

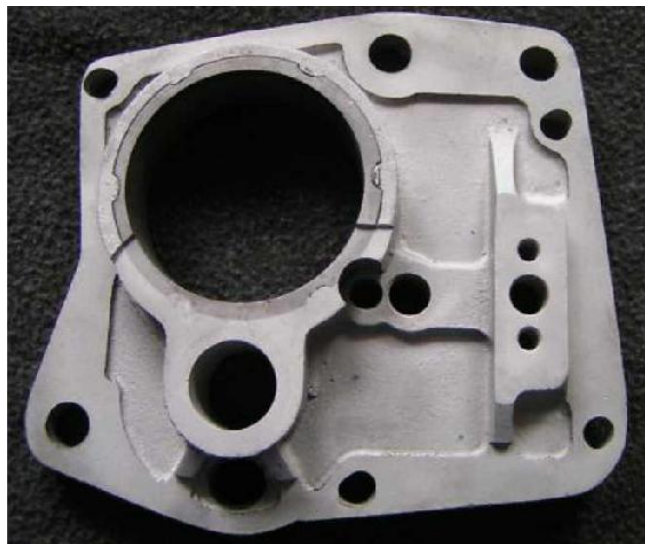


**34844-57 variation 1**

1958-1966 XLCH, 1967-1976 all



The same 34845-54 casting number which seems correct. The 1/4-20 hole for the primary cover is not drilled. This may have been used on XLCH models that don't use the center-mount primary cover.



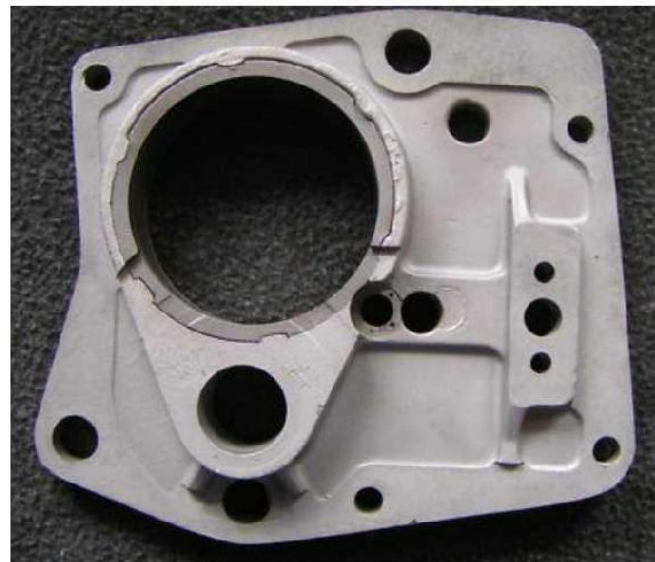
The backside seems identical, other than the small hole in the right edge where the tapped hole usually is.

**34844-57 variation 2**

1958-1966 XLCH, 1967-1976 all



Here the factory bumped the casting number to 34846-54A and removed the boss for the primary cover mount completely. No record of a service part number, this may be a -57A but that number does not appear in the parts books, it is just supposition.



The new casting has much more material between the mainshaft and countershaft bearings. Not the added hole below the top dowel pin hole.

**34844-57B**

1977-1978 all



Casting number 34846-76. This door has a big divot in the left edge to pass the shifter shaft, on the left side starting in 1977. It was part of the major case redesign financed by the AMF (American Machine and Foundry) owners of Harley Davidson.



Like the mystery door just prior, this door has much more material between the mainshaft and countershaft bearing holes.

**34844-57B (con't)**

1977-1978 all



Here is a cleaner picture but at lower resolution.



The increased material between the shaft bearings is a good feature of this part, and why you might want to retrofit it to any 1957 or later bike that does not need the center hole primary cover mount.

You should line-hone the mainshaft bearing in the case any time you replace a trap door.



**34847-79**

L1979-E1984 all (assembly)



Casting number 34846-76. I think the snap rings in the bearing bore are wider in the 79-later tranny, otherwise identical.



The wider snap rings may keep the mainshaft bearing from moving a little to the right side when the clutch is depressed. This closes up the mainshaft endplay, unlike dry clutch setups where the clearance increases with clutch application.

**34841-84**

L1979-E1984 (must retrofit)

The 34847-79 part is called out as an assembly in the parts book. This looks like a part intended to retrofit that is the door.

**Goof ball**

1984-who cares?



In late 1984 the factory decided to remove the easily-serviceable generator from the front of the engine. They put an alternator behind the clutch.



This is so different from any other Iron Sportster this late 1984 model is not covered in this website. In 1985 the Evo Porsche engine was introduced. This alternator setup did not last long, Harley soon moved the alternator under the front sprocket, like on Big Bikes since 1970.

# Aftermarket doors

Initially racers, and then artisanal builders, have come out with stronger trap doors.

## Trock

1958-1966 XLCH, 1967-1978 all, not in production



Ron Trock served the drag racing community. To make the strongest trap door he could, he used cast iron.



The downside to the strength is that this door is much heavier. There are modern aluminum alloys that are nearly as strong, at least in their billet form.

## Stociek

1957-1969 XLCH, 1970-1976 all



David Stociek was a drag racer in the midwest. He offered this billet trap door. It may still be available. (courtesy fdny37)



Sales info from the Stociek website



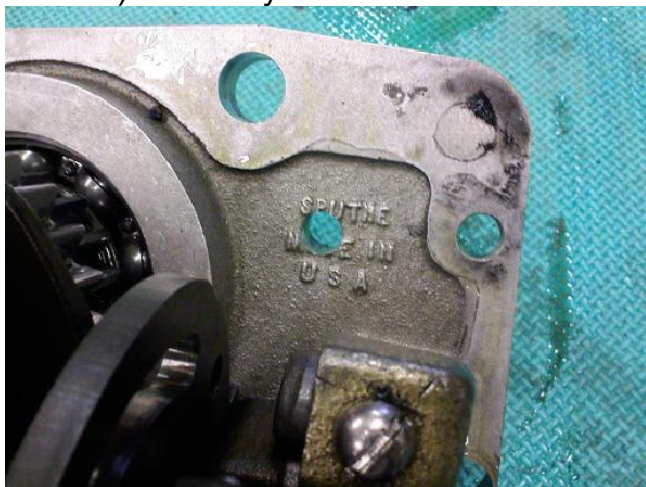


## Sputhe

1958-1966 XLCH, 1967-1978 all, not in production



Alan Sputhe is a pattern-maker. (courtesy Dr Dick) Alan may still have some.



(courtesy Dr Dick)













## Vulcan

1958-1969 XLCH, 1970-1978 all, \$162



Fit problems, (courtesy ericfreeman55)

Quick reference and comparison table, Iron Sportster transmission trap doors. Used on K-model motorcycles as well, 1954-1956.

Service part number	Casting part number	Front	Back
<b>No service part number</b>	<b>34845-54</b>		
<b>34844-57</b>	<b>34845-54</b>		
<b>34844-57 variation 1</b>	<b>34845-54</b>		
<b>34844-57 variation 2</b>	<b>34846-54A</b>		
<b>34844-57B</b>	<b>34846-76</b>		
<b>34847-79</b>	<b>34846-76</b>		
<b>Goof ball</b>	Who cares?	